CLAIMS

What is claimed as being new and desired to be protected by LETTERS PATENT of the United States is as follows:

1. An illumination system for providing efficient and highly recognizable devices for producing light comprising in combination:

a thin circular plate comprised of thermally conductive material having an upper surface and a lower surface;

a plurality of rectilinear "L" shaped thermally conductive circuit boards each having an internal face, an external face, a pair of parallel side edges, a vertical portion and a horizontal portion and a bend there between, with the external face of the vertical portion having a means for attachment of at least one LED, and the horizontal portion having a means for attachment to the plate, the circuit boards being arranged in a configuration with adjacent parallel side edges separated from each other;

at least one light emitting diode functioning as a light emitter being coupled to the vertical portion of the circuit board with means to maximize heat transfer;

an optical lens of a generally cylindrical configuration formed as a dome having a closed top end and an open bottom end and comprised of a transparent material, the open bottom end being configured to lie adjacent to the upper surface of the plate;

a mounting base of a generally cylindrical configuration with an open top part, a closed bottom part and a side face there around, the top part having a lip adapted to lie adjacent the lower surface of the plate with an aperture and flange extending from the mounting base;

a plurality of rivets adapted to couple together the circuit boards and the plate and the base;

a retainer ring adapted to couple together the lens and the plate and the mounting base; and

an external electrical source operatively coupled to the system.

2. An illumination system comprising:

a mounting plate;

a plurality of thermally conductive circuit boards in thermal contact with the mounting plate;

a plurality of light emitting diodes electrically and thermally communicating with the circuit boards;

an optical lens formed as a translucent dome covering the circuit boards and light emitting diodes;

a base operatively coupled to the mounting plate and lens; and

an external electrical source to provide power to the system.

3. The system as set forth in claim 2 wherein the base is of a generally cylindrical configuration with an open top part, a closed bottom part and a side face there around, the top part having a lip adapted to lie adjacent the lower surface of the plate with a entrance aperture and flange extending from the mounting base.

4. An illumination system comprising:

a mounting plate;

a plurality of thermally conductive circuit boars in thermal contact with the mounting plate;

at least one pair of light emitting diodes, with each pair being operative coupled to a circuit board wherein the diodes are adjacently disposed and electrically connected in a parallel circuit configuration;

an optical lens formed as a translucent dome, the lens covering the circuit boards and light emitting diodes; and

an electrical power means providing a constant current to each light emitting diode pair.

5. The system as set forth in Claim 4 wherein the base has a generally cylindrical configuration with an open top part, a closed bottom part and a side face there around, the top part having a lip configured to lie adjacent the lower surface of the plate with an entrance aperture and flange extending from the mounting base.

6. The system as set forth in Claim 4 wherein the system further comprises a plurality of conductive circuit boards and plurality of pairs of light emitting diodes.

7. The system as set forth in Claim 4 wherein the system further comprises the lens having a vertical position with the dome oriented upwards, with the lens producing a substantially azimuthally uniform optical output having a narrowed vertical extent and a peak output in the range extending from 0 degrees to 50 degrees elevation.